

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended). A washing machine, comprising:

a washing drum;

a drive motor for operating said washing drum and having a rotor and a stator;

a processor-controlled inverter connected to and controlling said drive motor, said drive motor commutating brushlessly by way of said processor-controlled inverter;

an actuator disc connected non-rotatably to said rotor of said motor, said actuator disc having an incremental sensor with mutually spaced actuators disposed along a path of rotary movement;

a pulse sender fixed with respect to the washing machine tub, and in a course of said actuators on said actuator disc

moving past said pulse sender trigger incremental counting pulses;

an incremental counter counting the incremental counting pulses for determining information about an instantaneous angular position of said rotor relative to said stator; and

a processor connected to and controlling said inverter and further connected to said incremental counter, said processor receiving the information about the instantaneous angular position.

Claim 2 (original). The washing machine according to claim 1, further comprising a synchronization logic unit connected to and setting said incremental counter to an initial counting position at a predetermined initial position of the path of rotary movement of said washing drum which is non-rotatably connected to said actuator disc and said rotor.

Claim 3 (original). The washing machine according to claim 2, further comprising an addition actuator disposed on said actuator disc for activating said synchronization logic unit.

Claim 4 (original). The washing machine according to claim 2, wherein said actuator disc has a marked discontinuity

oriented to a magnetic field of said rotor in a spatially fixed and pre-known relationship and said synchronization logic unit is activatable thereby.

Claim 5 (original). The washing machine according to claim 2, wherein said processor causes a steady feeding of direct current to said drive motor at a beginning of operation until said rotor, being a permanent-magnetic rotor, has rotated relative to said stator into a rotary position corresponding to that field direction, whereupon said synchronization logic unit is activated and operation of said drive motor is started with a rotating field by way of said process-controlled inverter.

Claim 6 (original). The washing machine according to claim 1, wherein said pulse sender operates optoelectronically in a manner of a transmission-type light barrier configuration and a spacing of said actuators on said actuator disc defining a sequence of openings.

Claim 7 (original). The washing machine according to claim 1, wherein:

said actuators are reflectors; and

said pulse sender operates optoelectronically in a manner of a reflection-type light barrier configuration with a sequence of said reflectors disposed on said actuator disc.

Claim 8 (original). The washing machine according to claim 1, wherein said incremental sensor supplies pairs of counting pulses, said pairs being phase-displaced relative to each other, wherein any change in a direction of rotation of said rotor and thus said washing drum relative to said pulse sender which is fixed with respect to the washing machine is derived from a sequence of the counting pulses, for switching over a counting direction in said incremental counter.

Claim 9 (original). The washing machine according to claim 2, wherein said synchronization logic unit responds to in-phase relationship of a motor current with a terminal voltage induced by said rotor during a passage through zero of the motor current through that winding line of said stator.

Claim 10 (original). The washing machine according to claim 1, wherein a number of said actuators on said actuator disc is an even multiple of a number of magnet dipoles of said rotor.

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Claim 11 (original). The washing machine according to claim 4, wherein said marked discontinuity is in a form of interrupted or multiple pulse deliveries from said pulse sender.